



IP-022.ST25.txt  
SEQUENCE LISTING

<110> Du, Chunying  
Yang, Qiheng

<120> Method and Composition for Cleaving IAPs

<130> 40716(IP-022)

<160> 87

<170> PatentIn version 3.3

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ttggccattg gggagcagat ggtacaaaat gctgaagatg tttatgaagc tgttcgaacc 900
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<210> 13
<211> 975
<212> DNA
<213> Homo sapiens

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<220>
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<223> n = Cleaved Nucleic Acids

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<220>
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<222> (193)..(193)
<223> n = t, c

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<220>
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<222> (195)..(195)
<223> n = t, c

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<220>
<221> misc_feature
<222> (285)..(285)
<223> n = a, t, g, c

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<220>
<221> misc_feature
<222> (519)..(519)
<223> n = t, g

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<400> 13
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## IP-022.ST25.txt

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<210> 15  
 <211> 675  
 <212> DNA  
 <213> Homo sapiens

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 <223> n = Cleaved Nucleic Acids

<220>  
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 <222> (193)..(193)  
 <223> n = t, c

<220>  
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 <223> n = t, c

<220>  
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 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
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 <223> n = a, t, g, c

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 ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
 gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
 gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
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 tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg 540  
 gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
 ccttctgatc gtcttcgaga gtttctgcat cgtggggaaa agaagaattc ctcctccgga 660  
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<210> 16  
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 <212> DNA  
 <213> Homo sapiens

<220>  
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 <223> n = Cleaved Nucleic Acids

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 <222> (193)..(193)  
 <223> n = t, c

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 <222> (195)..(195)  
 <223> n = t, c

<220>  
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 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
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 <223> n=a, t, g, c

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 gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
 ctttctgatc gtcttcgaga gtttctgcat cgtggggaaa agaagaattc ctcctccgga 660  
 atcagtgggt cccag 675

<210> 17  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

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attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
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 <213> Homo sapiens

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 <223> n = t, c

<220>  
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 <223> n = t, c

<220>  
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 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
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gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
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 <212> DNA  
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 <223> n = t, c

<220>  
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 <223> n = t, c

<220>  
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<210> 20  
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<220>  
 <221> misc\_feature



<222> (194)..(194)  
 <223> n = t, g, c

<220>  
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 <222> (195)..(195)  
 <223> n = a, t, g, c

<220>  
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 <223> n = t, g, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
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 <222> (519)..(519)  
 <223> n = a, t, g, c

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 gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cagnnatcgc aacgctgagg 300  
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 ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc 420  
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 tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggtaaacctg 540  
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 <213> Homo sapiens

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 <223> n = a, t, g, c

<220>  
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 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (517)..(517)  
 <223> n = g, c

<220>  
 <221> misc\_feature  
 <222> (518)..(519)  
 <223> n = a, t, g, c

<400> 21  
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 ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
 gtcaccaacg ccnnngtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
 gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cannnatcgc aacgctgagg 300  
 attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
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<210> 22  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

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 <212> DNA  
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<220>  
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 <223> n = Cleaved Nucleic Acids

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
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 <222> (195)..(195)  
 <223> n = t, c

<220>  
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 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
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 ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
 gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcg gtgtgagact gctaagcggc 240  
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 <211> 636  
 <212> DNA  
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<220>  
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<222> (1)..(12)  
 <223> n = Cleaved Nucleic Acids

<220>  
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 <222> (193)..(193)  
 <223> n = t, c

<220>  
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 <222> (195)..(195)  
 <223> n = t, c

<220>  
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 <223> n = a, t, g, c

<220>  
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 <223> n = a, t, g, c

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 gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
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<210> 25  
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 <212> DNA  
 <213> Homo sapiens

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 gtcaccaacg cccatgtggt ggctgacgga cgcagagtcc gtgtgagact gctaagcggc 240  
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## IP-022.ST25.txt

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tacattcaaa ctgatgcagc tattgatttt ggaaactctg gaggtcccct ggttaacctg 540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600
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<210> 26
<211> 630
<212> DNA
<213> Homo sapiens

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<220>
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<223> n = t, c

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<220>
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<222> (285)..(285)
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<220>
<221> misc_feature
<222> (519)..(519)
<223> n = a, t, g, c

```

```

<400> 26
gccgtcccta gccgcgcgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180
gtcaccaacg ccnangtggg ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240
gacacgtatg aggccgtggg cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360
ggggagtttg ttgttgccat gggaagtccc ttgactgc agaacacgat cacatccggc 420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg 540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600
ccttctgatc gtcttcgaga gtttctgcat 630

```

<210> 27  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n=a, t, g, c

<400> 27  
 gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
 gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
 ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
 gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
 gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
 attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
 ggggagtttg ttgttgccat gggaagtccc ttgactgc agaacacgat cacatccggc 420  
 attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
 tacattcaaa ctgatgcagc tattgatttt ggaaacagng gaggtcccct ggtaacctg 540  
 gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
 ccttctgatc gtcttcgaga gtttctgcat 630

<210> 28  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (194)..(194)  
 <223> n = t, g, c

<220>  
 <221> misc\_feature

<222> (195)..(195)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (284)..(284)  
 <223> n = t, g, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<400> 28  
 gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
 gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
 ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
 gtcaccaacg ccgngtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
 gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cagnnatcgc aacgctgagg 300  
 attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
 ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc 420  
 attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
 tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggtaacctg 540  
 gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
 ctttctgatc gtcttcgaga gtttctgcat 630

<210> 29  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (193)..(195)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (283)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (517)..(517)  
 <223> n = g, c

<220>  
 <221> misc\_feature  
 <222> (518)..(519)  
 <223> n = a, t, g, c

<400> 29  
 gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
 gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
 ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
 gtcaccaacg ccnnngtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
 gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cannnatcgc aacgctgagg 300  
 attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
 ggggagtttg ttgttgccat ggaagtccc ttgactgc agaacacgat cacatccggc 420  
 attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
 tacattcaaa ctgatgcagc tattgatttt ggaaacnng gaggtcccct ggtaaacctg 540  
 gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
 ccttctgatc gtcttcgaga gtttctgcat 630

<210> 30  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (160)..(162)  
 <223> n = Deleted Nucleic Acids

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<400> 30  
 gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60



## IP-022.ST25.txt

```

gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120
ggccgcgagg tccctatctc gaacggctca ggattcgtgn nngctgccga tgggctcatt 180
gtcaccaacg ccnangtggt ggctgacgga cgcagagtcc gtgtgagact gctaagcggc 240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc 420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggtaaacctg 540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600
ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

```

```

<210> 31
<211> 636
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (193)..(193)
<223> n = t, c

```

```

<220>
<221> misc_feature
<222> (195)..(195)
<223> n = t, c

```

```

<220>
<221> misc_feature
<222> (229)..(231)
<223> n = Deleted Nucleic Acids

```

```

<220>
<221> misc_feature
<222> (285)..(285)
<223> n = a, t, g, c

```

```

<220>
<221> misc_feature
<222> (519)..(519)
<223> n = a, t, g, c

```

```

<400> 31
gccgtcccta gccgcgcgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180
gtcaccaacg ccnangtggt ggctgacgga cgcagagtcc gtgtgagann nctaagcggc 240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300

```

## IP-022.ST25.txt

```

attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360
ggggagtttg ttgttgccat gggaagtccc ttgcaactgc agaacacgat cacatccggc 420
attgttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa 480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg 540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600
ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

```

```

<210> 32
<211> 636
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (193)..(193)
<223> n = t, c

```

```

<220>
<221> misc_feature
<222> (195)..(195)
<223> n = t, c

```

```

<220>
<221> misc_feature
<222> (285)..(285)
<223> n = a, t, g, c

```

```

<220>
<221> misc_feature
<222> (370)..(372)
<223> n = Deleted Nucleic Acids

```

```

<220>
<221> misc_feature
<222> (519)..(519)
<223> n = t, g

```

```

<400> 32
gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcg gtgtgagact gctaagcggc 240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360
ggggagtttn nngttgccat gggaagtccc ttgcaactgc agaacacgat cacatccggc 420
attgttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa 480
tacattcaaa ctgatgcagc tattgatttt ggaaacagng gaggtcccct ggttaacctg 540

```

gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
 ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

<210> 33  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (530)..(532)  
 <223> n = Deleted Nucleic Acids

<400> 33  
 gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
 gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
 ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
 gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
 gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
 attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
 ggggagtttg ttgttgccat gggaagtccc tttgactgac agaacacgat cacatccggc 420  
 attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
 tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccn nnttaacctg 540  
 gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
 ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

<210> 34  
 <211> 618  
 <212> DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 34

```

ccgccgcccc cttctccccg gagtcagtac aacttcatcg cagatgtggt ggagaagaca      60
gcacctgccg tggctctatat cgagatcctg gaccggcacc ctttcttggg ccgcgaggtc      120
cctatctcga acggctcagg attcgtggtg gctgccgatg ggctcattgt caccaacgcc      180
catgtggtgg ctgatcggcg cagagtcctg gtgagactgc taagcggcga cacgtatgag      240
gccgtggtca cagctgtgga tcccgtggca gacatcgcaa cgctgaggat tcagactaag      300
gagcctctcc ccacgtgcc tctgggacgc tcagctgatg tccggcaagg ggagtttggt      360
gttgccatgg gaagtccctt tgcactgcag aacacgatca catccggcat tgtagctct      420
gctcagcgtc cagccagaga cctgggactc ccccaaacca atgtggaata cattcaaact      480
gatgcagcta ttgattttgg aaactctgga ggtcccctgg ttaacctgga tggggagggtg      540
attggagtga acaccatgaa ggtcacagct ggaatctcct ttgccatccc ttctgatcgt      600
cttcgagagt ttctgcat                                     618

```

&lt;210&gt; 35

&lt;211&gt; 630

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (1)..(12)

&lt;223&gt; n = Cleaved Nucleic Acids

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (193)..(193)

&lt;223&gt; n = t, c

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (195)..(195)

&lt;223&gt; n = t, c

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (285)..(285)

&lt;223&gt; n = a, t, g, c

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;222&gt; (519)..(519)

&lt;223&gt; n = a, t, g, c

&lt;400&gt; 35

```

nnnnnnnnnn nnccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg      60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg      120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt      180

```

IP-022.ST25.txt

gtcaccaacg ccnangtggt ggctgacg	cgagagtc	gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg	gatcccgtgg caganatcgc aacgctgagg		300
attcagacta aggagcctct cccacgctg	cctctgggac gctcagctga tgtccggcaa		360
ggggagtttg ttgttgccat gggaagtccc	tttgactgac agaacacgat cacatccggc		420
attgttagct ctgctcagcg tccagccaga	gacctgggac tccccaaac caatgtggaa		480
tacattcaaa ctgatgcagc tattgatttt	ggaaactcng gaggtcccct ggттаacctg		540
gatggggagg tgattggagt gaacaccatg	aaggtcacag ctggaatctc ctttgccatc		600
ccttctgatc gtcttcgaga gtttctgcat			630

<210> 36  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(12)  
 <223> n = Cleaved Nucleic Acids

<220>  
 <221> misc\_feature  
 <222> (160)..(162)  
 <223> n = Deleted Nucleic Acids

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<400> 36 nnnnnnnnnn nnccgccgcc cgcttctccc	cggagtcagt acaacttcat cgcagatgtg	60
gtggagaaga cagcacctgc cgtggtctat	atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca	ggattcgtgn nngctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgacg	cgagagtc gtgtgagact gctaagcggc	240

```

gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360
ggggagtttg ttgttgccat gggaagtccc ttgactgc agaacacgat cacatccggc 420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg 540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600
ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

```

```

<210> 37
<211> 636
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)..(12)
<223> n = Cleaved Nucleic Acids

```

```

<220>
<221> misc_feature
<222> (193)..(193)
<223> n = t, c

```

```

<220>
<221> misc_feature
<222> (195)..(195)
<223> n = t, c

```

```

<220>
<221> misc_feature
<222> (229)..(231)
<223> n = Deleted Nucleic Acids

```

```

<220>
<221> misc_feature
<222> (285)..(285)
<223> n = a, t, g, c

```

```

<220>
<221> misc_feature
<222> (519)..(519)
<223> n = a, t, g, c

```

```

<400> 37
nnnnnnnnnn nncgcgcgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagann nctaagcggc 240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360

```

IP-022.ST25.txt

```

ggggagtttg ttgttgccat gggaagtccc ttgcaactgc agaacacgat cacatccggc 420
attgttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa 480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggtaaacctg 540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600
ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

```

```

<210> 38
<211> 636
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> (1)..(12)
<223> n = Cleaved Nucleic Acids

```

```

<220>
<221> misc_feature
<222> (193)..(193)
<223> n = t, c

```

```

<220>
<221> misc_feature
<222> (195)..(195)
<223> n = t, c

```

```

<220>
<221> misc_feature
<222> (285)..(285)
<223> n = a, t, g, c

```

```

<220>
<221> misc_feature
<222> (370)..(372)
<223> n = Deleted Nucleic Acids

```

```

<220>
<221> misc_feature
<222> (519)..(519)
<223> n = a, t, g, c

```

```

<400> 38
nnnnnnnnnn nnccgcccgc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360
ggggagtttn nngttgcat gggaagtccc ttgcaactgc agaacacgat cacatccggc 420

```

attgttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggtaaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat cgtggg	636

<210> 39  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(12)  
 <223> n = Cleaved Nucleic Acids

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
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 <223> n = a, t, g, c

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gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
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## IP-022.ST25.txt

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<213> Homo sapiens

<400> 41  
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<210> 42  
<211> 2589  
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<400> 42  
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## IP-022.ST25.txt

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aaaaaaaaaa						2589

## IP-022.ST25.txt

<210> 43  
 <211> 2589  
 <212> DNA  
 <213> Homo sapiens

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 tggtaaaaat cttagtccat gtgaagaaat ttcattgtgaa tgttttagct atcaaacagc 180  
 actgtcacct actcatgcac aaaactgcct cccaaagact tttcccagggt ccctcgatatc 240  
 aaaacattaa gagtataatg gaagatagca cgatcttgtc agattggaca aacagcaaca 300  
 aacaaaaaat gaagtatgac ttttcctgtg aactctacag aatgtctaca tattcaactt 360  
 tccccgccgg ggtgcctgtc tcagaaagga gtcttgctcg tgctgggtttt tattatactg 420  
 gtgtgaatga caagggtcaaa tgcttctgtt gtggcctgat gctggataac tggaaactag 480  
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## IP-022.ST25.txt

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aaaaaaaaa 2589

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<210> 44
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<212> PRT
<213> Homo sapiens

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```

```
Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu
20          25          30
```

```
Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn
35          40          45
```

```
Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala
50          55          60
```

```
His Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly
65          70          75          80
```

```
Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile
85          90          95
```

IP-022.ST25.txt

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
225 230 235 240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
245 250 255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
260 265 270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
275 280 285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
290 295 300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
305 310 315 320

Pro Glu Val Thr Glu  
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<210> 45  
<211> 325

<212> PRT  
 <213> Homo sapiens

<220>  
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 <222> (65)..(65)  
 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
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 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
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 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 45

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Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
                   180                                  185                                  190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
                   195                                  200                                  205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
                   210                                  215                                  220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
                   225                                  230                                  235                                  240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
                                   245                                  250                                  255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
                                   260                                  265                                  270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
                   275                                  280                                  285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
                   290                                  295                                  300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
                   305                                  310                                  315                                  320

Pro Glu Val Thr Glu  
                                   325

<210> 46  
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 <212> PRT  
 <213> Homo sapiens

<220>  
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 <223> Xaa = Ala, Asp, Asn, Cys, Glu, Gln, Gly, Ile, Leu, Met, Pro, Ser,  
           Thr, Val

<220>  
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 <223> Xaa = Ala, Gly, Ile, Leu, Met, Phe, Pro, Ser, Trp, Tyr, Val

<220>  
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 <222> (173)..(173)  
 <223> Xaa = Ser

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Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
225 230 235 240



Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
                   245                  250                  255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
                   260                  265                  270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
                   275                  280                  285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
                   290                  295                  300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
                   305                  310                  315                  320

Pro Glu Val Thr Glu  
                           325

<210> 47  
 <211> 325  
 <212> PRT  
 <213> Homo sapiens

<220>  
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       Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
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       Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
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   1                  5                  10                  15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
                   20                  25                  30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
                   35                  40                  45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
   Page 41

50

55

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
225 230 235 240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
245 250 255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
260 265 270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
275 280 285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
290 295 300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
 305 310 315 320

Pro Glu Val Thr Glu  
 325

<210> 48  
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 <212> PRT  
 <213> Homo sapiens

<400> 48

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
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Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

His Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
 210 215 220

Gln  
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<210> 49  
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<220>  
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<220>  
 <221> MISC\_FEATURE  
 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
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 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 49

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

IP-022.ST25.txt

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln  
225

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Val

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Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
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Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

IP-022.ST25.txt

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln  
225

<210> 51  
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<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Page 46

Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

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&lt;221&gt; MISC\_FEATURE

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&lt;223&gt; Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn, Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

&lt;220&gt;

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&lt;222&gt; (173)..(173)

&lt;223&gt; Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn, Pro, Gln, Arg, Thr, Val, Trp, Tyr, Asx, Glx

&lt;400&gt; 51

Ala	Val	Pro	Ser	Pro	Pro	Pro	Ala	Ser	Pro	Arg	Ser	Gln	Tyr	Asn	Phe
1				5					10					15	

Ile	Ala	Asp	Val	Val	Glu	Lys	Thr	Ala	Pro	Ala	Val	Val	Tyr	Ile	Glu
			20					25					30		

Ile	Leu	Asp	Arg	His	Pro	Phe	Leu	Gly	Arg	Glu	Val	Pro	Ile	Ser	Asn
		35					40					45			

Gly	Ser	Gly	Phe	Val	Val	Ala	Ala	Asp	Gly	Leu	Ile	Val	Thr	Asn	Ala
	50					55					60				

Xaa	Val	Val	Ala	Asp	Arg	Arg	Arg	Val	Arg	Val	Arg	Leu	Leu	Ser	Gly
65					70					75					80

Asp	Thr	Tyr	Glu	Ala	Val	Val	Thr	Ala	Val	Asp	Pro	Val	Ala	Xaa	Ile
				85					90					95	

Ala	Thr	Leu	Arg	Ile	Gln	Thr	Lys	Glu	Pro	Leu	Pro	Thr	Leu	Pro	Leu
			100					105					110		

Gly	Arg	Ser	Ala	Asp	Val	Arg	Gln	Gly	Glu	Phe	Val	Val	Ala	Met	Gly
		115					120					125			

Ser	Pro	Phe	Ala	Leu	Gln	Asn	Thr	Ile	Thr	Ser	Gly	Ile	Val	Ser	Ser
	130					135					140				

Ala	Gln	Arg	Pro	Ala	Arg	Asp	Leu	Gly	Leu	Pro	Gln	Thr	Asn	Val	Glu
145					150					155					160

Tyr	Ile	Gln	Thr	Asp	Ala	Ala	Ile	Asp	Phe	Gly	Asn	Xaa	Gly	Gly	Pro
				165					170					175	

Leu	Val	Asn	Leu	Asp	Gly	Glu	Val	Ile	Gly	Val	Asn	Thr	Met	Lys	Val
			180					185					190		

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
 210 215 220

Gln  
 225

<210> 52  
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<400> 52

Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe Ile Ala Asp Val  
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Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu Ile Leu Asp Arg  
 20 25 30

His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn Gly Ser Gly Phe  
 35 40 45

Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala His Val Val Ala  
 50 55 60

Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly Asp Thr Tyr Glu  
 65 70 75 80

Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile Ala Thr Leu Arg  
 85 90 95

Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu Gly Arg Ser Ala  
 100 105 110

Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly Ser Pro Phe Ala  
 115 120 125

Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser Ala Gln Arg Pro  
 130 135 140

Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu Tyr Ile Gln Thr  
 145 150 155 160

Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro Leu Val Asn Leu  
 165 170 175



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Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val Thr Ala Gly Ile  
180 185 190

Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe Leu His Arg Gly  
195 200 205

Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser Gln Arg Arg Tyr  
210 215 220

Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile Leu Ala Glu Leu  
225 230 235 240

Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His Gly Val Leu Ile  
245 250 255

His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala Gly Leu Arg Pro  
260 265 270

Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val Gln Asn Ala Glu  
275 280 285

Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu Ala Val Gln Ile  
290 295 300

Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr Pro Glu Val Thr  
305 310 315 320

Glu

<210> 53  
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 <223> Xaa = Ser

<400> 53

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
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Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
 210 215 220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
 Page 50

225 230 235 240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
245 250 255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
260 265 270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
275 280 285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
290 295 300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
305 310 315 320

Pro Glu Val Thr Glu  
325

<210> 54  
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<212> PRT  
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<400> 54

Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe Ile Ala Asp Val  
1 5 10 15

Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu Ile Leu Asp Arg  
20 25 30

His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn Gly Ser Gly Phe  
35 40 45

Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala His Val Val Ala  
50 55 60

Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly Asp Thr Tyr Glu  
65 70 75 80

Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile Ala Thr Leu Arg  
85 90 95

Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu Gly Arg Ser Ala  
100 105 110

Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly Ser Pro Phe Ala  
Page 51

115

120

Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser Ala Gln Arg Pro  
130 135 140

Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu Tyr Ile Gln Thr  
145 150 155 160

Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro Leu Val Asn Leu  
165 170 175

Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val Thr Ala Gly Ile  
180 185 190

Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe Leu His Arg Gly  
195 200 205

Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser Gln  
210 215 220

<210> 55  
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<212> PRT  
<213> Homo sapiens

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<220>  
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<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
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<223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
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<222> (173)..(173)  
<223> Xaa = Ser

<400> 55

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

IP-022.ST25.txt

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln  
225

<210> 56  
<211> 212  
<212> PRT  
<213> Homo sapiens

<400> 56

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

His Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 57  
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<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

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&lt;221&gt; MISC\_FEATURE

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&lt;223&gt; Xaa = Asp, Glu, Lys, His, Arg

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

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&lt;223&gt; Xaa = Ser

&lt;400&gt; 57

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
210

<210> 58  
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Thr, Val

<220>  
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<220>  
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<223> Xaa = Ser

<400> 58

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140



Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
 210

<210> 59  
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<220>  
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 Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
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 Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
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 Pro, Gln, Arg, Thr, Val, Trp, Tyr, Asx, Glx

<400> 59

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

IP-022.ST25.txt

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 60  
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<400> 60

Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe Ile Ala Asp Val  
1 5 10 15

Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu Ile Leu Asp Arg  
20 25 30

His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn Gly Ser Gly Phe  
35 40 45

Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala His Val Val Ala  
50 55 60

IP-022.ST25.txt

Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly Asp Thr Tyr Glu  
65 70 75 80

Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile Ala Thr Leu Arg  
85 90 95

Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu Gly Arg Ser Ala  
100 105 110

Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly Ser Pro Phe Ala  
115 120 125

Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser Ala Gln Arg Pro  
130 135 140

Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu Tyr Ile Gln Thr  
145 150 155 160

Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro Leu Val Asn Leu  
165 170 175

Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val Thr Ala Gly Ile  
180 185 190

Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe Leu His Arg Gly  
195 200 205

<210> 61  
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<220>  
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<223> Xaa = Ser

&lt;400&gt; 61

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
 210

&lt;210&gt; 62

&lt;211&gt; 210

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 62

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

His Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His  
 210

&lt;210&gt; 63

&lt;211&gt; 210

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

<220>  
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 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

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 <223> Xaa = Asp, Glu, Lys, His, Arg

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 <223> Xaa = Ser

<400> 63

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 Page 62

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His  
 210

<210> 64  
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 <212> PRT  
 <213> Homo sapiens

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 Thr, Val

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 <223> Xaa = Ala, Gly, Ile, Leu, Met, Phe, Pro, Ser, Trp, Tyr, Val

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 <223> Xaa = Ser

<400> 64

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
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Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His  
 210

<210> 65  
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 <212> PRT  
 <213> Homo sapiens

<220>  
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 Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

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 Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

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 Pro, Gln, Arg, Thr, Val, Trp, Tyr, Asx, Glx

<400> 65

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 Page 64



35

40

45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His  
 210

<210> 66  
 <211> 212  
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 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

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&lt;221&gt; MISC\_FEATURE

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&lt;223&gt; Xaa = Asp, Glu, Lys, His, Arg

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (173)..(173)

&lt;223&gt; Xaa = Ser

&lt;400&gt; 66

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Xaa Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
210

<210> 67  
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<223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
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<223> Xaa = Ser

<400> 67

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Xaa Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
 210

<210> 68  
 <211> 212  
 <212> PRT  
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<220>  
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 Thr, Val

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 <223> Xaa = Ala, Gly, Ile, Leu, Met, Phe, Pro, Ser, Trp, Tyr, Val

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 <223> Xaa = Deleted Amino Acid

<220>  
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 <223> Xaa = Ser

<400> 68

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Xaa Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
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<210> 69  
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<220>  
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 <223> Xaa = Ser

<220>  
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 <222> (177)..(177)  
 <223> Xaa = Deleted Amino Acid

<400> 69

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Xaa Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
210

<210> 70  
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<212> PRT  
<213> Homo sapiens

<400> 70

Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe Ile Ala Asp Val  
1 5 10 15

Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu Ile Leu Asp Arg  
20 25 30

His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn Gly Ser Gly Phe  
35 40 45

Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala His Val Val Ala  
50 55 60

Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly Asp Thr Tyr Glu  
65 70 75 80

Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile Ala Thr Leu Arg  
85 90 95

Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu Gly Arg Ser Ala  
100 105 110

Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly Ser Pro Phe Ala  
115 120 125

Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser Ala Gln Arg Pro  
130 135 140

Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu Tyr Ile Gln Thr  
145 150 155 160

Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro Leu Val Asn Leu  
165 170 175

Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val Thr Ala Gly Ile  
180 185 190

Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe Leu His  
195 200 205

<210> 71  
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 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 71

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 Page 72



130

135

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His  
210

<210> 72  
<211> 212  
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<220>  
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<223> Xaa = Ser

<400> 72

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
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Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

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Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Xaa Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 73  
<211> 212  
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<220>

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<222> (173)..(173)

<223> Xaa = Ser

<400> 73

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Xaa Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
 210

<210> 74  
 <211> 212  
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<220>  
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 <223> Xaa = Ser

<400> 74

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
                   85                  90                  95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
                   100                  105                  110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Xaa Val Ala Met Gly  
                   115                  120                  125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
                   130                  135                  140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
                   145                  150                  155                  160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
                   165                  170                  175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
                   180                  185                  190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
                   195                  200                  205

Leu His Arg Gly  
                   210

<210> 75  
 <211> 212  
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<220>  
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<220>  
 <221> MISC\_FEATURE  
 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
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&lt;221&gt; MISC\_FEATURE

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&lt;223&gt; Xaa = Deleted Amino Acid

&lt;400&gt; 75

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Xaa Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 76  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 76

Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile Leu  
 1 5 10 15

Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His Gly  
 20 25 30

Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala Gly  
 35 40 45

Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val Gln  
 50 55 60

Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu Ala  
 65 70 75 80

Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr Pro  
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Glu Val Thr Glu  
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Ala Val Pro Ser  
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Met His Lys Thr Ala Ser Gln Arg Leu Phe Pro Gly Pro Ser Tyr Gln  
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Asn Ile Lys Ser Ile Met Glu Asp Ser Thr Ile Leu Ser Asp Trp Thr  
 20 25 30

Asn Ser Asn Lys Gln Lys Met Lys Tyr Asp Phe Ser Cys Glu Leu Tyr  
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35

40

45

Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu  
50 55 60

Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys  
65 70 75 80

Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Leu Gly  
85 90 95

Asp Ser Pro Ile Gln Lys His Lys Gln Leu Tyr Pro Ser Cys Ser Phe  
100 105 110

Ile Gln Asn Leu Val Ser Ala Ser Leu Gly Ser Thr Ser Lys Asn Thr  
115 120 125

Ser Pro Met Arg Asn Ser Phe Ala His Ser Leu Ser Pro Thr Leu Glu  
130 135 140

His Ser Ser Leu Phe Ser Gly Ser Tyr Ser Ser Leu Ser Pro Asn Pro  
145 150 155 160

Leu Asn Ser Arg Ala Val Glu Asp Ile Ser Ser Ser Arg Thr Asn Pro  
165 170 175

Tyr Ser Tyr Ala Met Ser Thr Glu Glu Ala Arg Phe Leu Thr Tyr His  
180 185 190

Met Trp Pro Leu Thr Phe Leu Ser Pro Ser Glu Leu Ala Arg Ala Gly  
195 200 205

Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys Gly  
210 215 220

Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Asp Ala Met Ser Glu His  
225 230 235 240

Arg Arg His Phe Pro Asn Cys Pro Phe Leu Glu Asn Ser Leu Glu Thr  
245 250 255

Leu Arg Phe Ser Ile Ser Asn Leu Ser Met Gln Thr His Ala Ala Arg  
260 265 270

Met Arg Thr Phe Met Tyr Trp Pro Ser Ser Val Pro Val Gln Pro Glu  
275 280 285



Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Arg Asn Asp Asp Val  
 290 295 300

Lys Cys Phe Cys Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser Gly Asp  
 305 310 315 320

Asp Pro Trp Val Glu His Ala Lys Trp Phe Pro Arg Cys Glu Phe Leu  
 325 330 335

Ile Arg Met Lys Gly Gln Glu Phe Val Asp Glu Ile Gln Gly Arg Tyr  
 340 345 350

Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Thr Thr Gly Glu  
 355 360 365

Glu Asn Ala Asp Pro Pro Ile Ile His Phe Gly Pro Gly Glu Ser Ser  
 370 375 380

Ser Glu Asp Ala Val Met Met Asn Thr Pro Val Val Lys Ser Ala Leu  
 385 390 395 400

Glu Met Gly Phe Asn Arg Asp Leu Val Lys Gln Thr Val Gln Ser Lys  
 405 410 415

Ile Leu Thr Thr Gly Glu Asn Tyr Lys Thr Val Asn Asp Ile Val Ser  
 420 425 430

Ala Leu Leu Asn Ala Glu Asp Glu Lys Arg Glu Glu Glu Lys Glu Lys  
 435 440 445

Gln Ala Glu Glu Met Ala Ser Asp Asp Leu Ser Leu Ile Arg Lys Asn  
 450 455 460

Arg Met Ala Leu Phe Gln Gln Leu Thr Cys Val Leu Pro Ile Leu Asp  
 465 470 475 480

Asn Leu Leu Lys Ala Asn Val Ile Asn Lys Gln Glu His Asp Ile Ile  
 485 490 495

Lys Gln Lys Thr Gln Ile Pro Leu Gln Ala Arg Glu Leu Ile Asp Thr  
 500 505 510

Ile Leu Val Lys Gly Asn Ala Ala Ala Asn Ile Phe Lys Asn Cys Leu  
 515 520 525

Lys Glu Ile Asp Ser Thr Leu Tyr Lys Asn Leu Phe Val Asp Lys Asn  
 530 535 540

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Met Lys Tyr Ile Pro Thr Glu Asp Val Ser Gly Leu Ser Leu Glu Glu  
545 550 555 560

Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Met Asp  
565 570 575

Lys Glu Val Ser Val Val Phe Ile Pro Cys Gly His Leu Val Val Cys  
580 585 590

Gln Glu Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg Gly Ile  
595 600 605

Ile Lys Gly Thr Val Arg Thr Phe Leu Ser  
610 615

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Met Asn Ile Val Glu Asn Ser Ile Phe Leu Ser Asn Leu Met Lys Ser  
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Ala Asn Thr Phe Glu Leu Lys Tyr Asp Leu Ser Cys Glu Leu Tyr Arg  
20 25 30

Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu Arg  
35 40 45

Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys Val  
50 55 60

Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Arg Gly Asp  
65 70 75 80

Ser Pro Thr Glu Lys His Lys Lys Leu Tyr Pro Ser Cys Arg Phe Val  
85 90 95

Gln Ser Leu Asn Ser Val Asn Asn Leu Glu Ala Thr Ser Gln Pro Thr  
100 105 110

Phe Pro Ser Ser Val Thr Asn Ser Thr His Ser Leu Leu Pro Gly Thr  
115 120 125

Glu Asn Ser Gly Tyr Phe Arg Gly Ser Tyr Ser Asn Ser Pro Ser Asn  
130 135 140

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Pro Val Asn Ser Arg Ala Asn Gln Asp Phe Ser Ala Leu Met Arg Ser  
145 150 155 160

Ser Tyr His Cys Ala Met Asn Asn Glu Asn Ala Arg Leu Leu Thr Phe  
165 170 175

Gln Thr Trp Pro Leu Thr Phe Leu Ser Pro Thr Asp Leu Ala Lys Ala  
180 185 190

Gly Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys  
195 200 205

Gly Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Asn Ala Met Ser Glu  
210 215 220

His Leu Arg His Phe Pro Lys Cys Pro Phe Ile Glu Asn Gln Leu Gln  
225 230 235 240

Asp Thr Ser Arg Tyr Thr Val Ser Asn Leu Ser Met Gln Thr His Ala  
245 250 255

Ala Arg Phe Lys Thr Phe Phe Asn Trp Pro Ser Ser Val Leu Val Asn  
260 265 270

Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Asn Ser Asp  
275 280 285

Asp Val Lys Cys Phe Cys Cys Asp Gly Gly Leu Arg Cys Trp Glu Ser  
290 295 300

Gly Asp Asp Pro Trp Val Gln His Ala Lys Trp Phe Pro Arg Cys Glu  
305 310 315 320

Tyr Leu Ile Arg Ile Lys Gly Gln Glu Phe Ile Arg Gln Val Gln Ala  
325 330 335

Ser Tyr Pro His Leu Leu Glu Gln Leu Leu Ser Thr Ser Asp Ser Pro  
340 345 350

Gly Asp Glu Asn Ala Glu Ser Ser Ile Ile His Phe Glu Pro Gly Glu  
355 360 365

Asp His Ser Glu Asp Ala Ile Met Met Asn Thr Pro Val Ile Asn Ala  
370 375 380

Ala Val Glu Met Gly Phe Ser Arg Ser Leu Val Lys Gln Thr Val Gln  
385 390 395 400

Arg Lys Ile Leu Ala Thr Gly Glu Asn Tyr Arg Leu Val Asn Asp Leu  
 405 410 415

Val Leu Asp Leu Leu Asn Ala Glu Asp Glu Ile Arg Glu Glu Glu Arg  
 420 425 430

Glu Arg Ala Thr Glu Glu Lys Glu Ser Asn Asp Leu Leu Leu Ile Arg  
 435 440 445

Lys Asn Arg Met Ala Leu Phe Gln His Leu Thr Cys Val Ile Pro Ile  
 450 455 460

Leu Asp Ser Leu Leu Thr Ala Gly Ile Ile Asn Glu Gln Glu His Asp  
 465 470 475 480

Val Ile Lys Gln Lys Thr Gln Thr Ser Leu Gln Ala Arg Glu Leu Ile  
 485 490 495

Asp Thr Ile Leu Val Lys Gly Asn Ile Ala Ala Thr Val Phe Arg Asn  
 500 505 510

Ser Leu Gln Glu Ala Glu Ala Val Leu Tyr Glu His Leu Phe Val Gln  
 515 520 525

Gln Asp Ile Lys Tyr Ile Pro Thr Glu Asp Val Ser Asp Leu Pro Val  
 530 535 540

Glu Glu Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys  
 545 550 555 560

Met Asp Lys Glu Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val  
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Val Cys Lys Asp Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg  
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Ser Thr Ile Lys Gly Thr Val Arg Thr Phe Leu Ser  
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Ala Ser Gln Arg Leu Phe Pro Gly  
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Ser Phe Ala His Ser Leu Ser Pro  
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Asn Ser Arg Ala Val Glu Asp Ile  
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